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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,420	03/09/2001	Raymond G. Blair	WC0001-A	7956

28168 7590 05/02/2002

CTS WIRELESS COMPONENTS/ CTS CORPORATION
PATENT LAW DEPARTMENT
171 COVINGTON DRIVE
BLOOMINGDALE, IL 60108

EXAMINER

BOSWELL, ALAN M

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 05/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,420

Applicant(s)

BLAIR ET AL.

Examiner

Alan M Boswell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/09/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 6 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US Patent No. 4,692,726 to Green.

Regarding claims 1- 2 6 and 8, Green teaches forming a dielectric block 105 having a surface area including at one planar surface encasing the entire surface area of the dielectric block 105 with a conductive metal and laser etching unwanted conductive metal from the at least one planar designed surface of the dielectric block 210 to form at least some desired metallized circuit patterns (see col.3, lines 50-52).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of US Patent No. 5,769,988 to Kagata.

Green teaches the above the limitations but fails to teach heating an electrically conductive metallic paste prior to the ablative etching to cause adherence of the conductive metal to the dielectric block.

Kagata teaches heating an electrically conductive metallic paste prior to the ablative etching to cause adherence of the conductive metal to the dielectric block for the purpose of obtaining a higher Q value (see col. 2, lines 18-21).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the invention of Green in light of the teaching of Kagata to coat the ceramic with a metallic paste.

5. Claims 7, 9 –11 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of US Patent No. 5,999,070 to Endo.

Green teaches the above the limitations but fails to teach removing a portion of the dielectric block to a depth sufficiently below the at least one planar surface to form a trench to electrically to form a trench to electrically isolate adjacent metallic areas formed by the ablative etching and providing a predetermined filter response.

Endo discloses removing a portion of the dielectric block to a depth sufficiently below the at least one planar surface to form a trench to electrically to form a trench 41,42)(which has been interpreted as being the same as non-conductive grooves) to electrically isolate adjacent metallic areas formed by the ablative etching and to form a first electrical filter circuit pattern of electrically isolated conductive elements having a first predetermined selected area filter frequency response (see col. 5, lines 52-67 and Fig. 4) in order to control the capacitive coupling in the dielectric filter.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the invention of Green in light of the teaching of Endo in order to control the capacitive coupling in the dielectric filter.

Regarding claims 10, 11, 15, 16 and 17, Green teaches forming a first terminal second terminal and third terminal-coupling antenna being formed on at least one of the block surfaces by removing surrounding metallic material and corresponding ceramic material sufficient to electrically isolate the input and the output from the surrounding conductive material and forming a duplexer for transmit/receive RF communication (see cols. 5 and 6, lines 35-67 and 1-29 respectively).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Endo as applied to claims 8-11 above, and further in view of US Patent No. 5,769,988 to Kagata.

Green and Endo teach the above limitations but they fails to and utilizing an ambient atmosphere during heating of the ceramic blocks to increase the Q of to ceramic blocks.

Kagata teaches utilizing an ambient atmosphere during heating of the ceramic blocks to increase the Q of to ceramic blocks (see col. 2, lines 30-35) in order to reduce the Q value losses due to in forming the filter.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the invention of Green in light of the teaching of Kagata to reduce the Q value losses due to forming the filter.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to show the state of the art in method of making RF Ceramic blocks filters.

US Patent No. 4965537 to Kommrusch.

Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan M Boswell whose telephone number is (703) 305-0308. The examiner can normally be reached on M-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 305-3579 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2572.

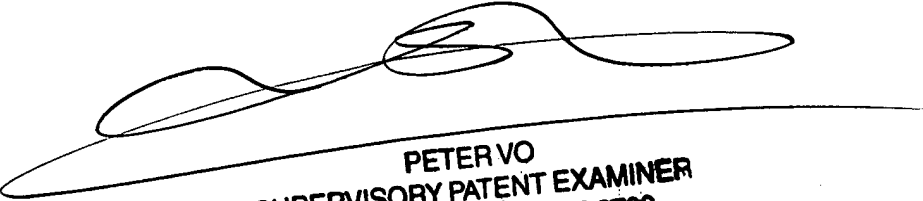
Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line	1-800-786-9199
Internet PTO-Home Page	http://www.uspto.gov

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April 29, 2002



PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700